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Examiner: Yogesh C. Garg

In the claims:

Please cancel claims 11, 12, 21, 24, and 30-32.

Please the claims as follows:

Claim 1 (currently amended): A method of source learning in a data switch having a plurality of switching modules interconnected over a backplane, and the backplane including a unicast fabric and a multicast fabric, the method comprising the steps of:

receiving a packet having a source address on a first switching module;

looking up the source address in a memory associated with the first switching module to determine if the source address is found in the memory;

providing a source learning indication for the packet if the source address is not found in the memory associated with the first switching module;

transmitting the packet over the backplane; and

associating the source address with the first switching module;

wherein the first switching module is disabled from transmitting other packets

having the same source address as the packet over the backplane while the

source address is being associated with the first switching module, and further wherein

other switching modules are disabled for a predetermined period of time, from

transmitting other packets having the source address of the packet as a destination address over the backplane.

Claim 2 (Original): The method of claim 1 further comprising the step of converting the packet into a plurality of cells, wherein the step of transmitting the packet over the backplane includes the step of transmitting the cells over the backplane.

Claim 3 (Original): The method of claim 1 further comprising discarding the packet if both the source address and a destination address of the packet are found in the memory associated with the first switching module.

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Claim 4 (Original): The method of claim 1 wherein the step of transmitting the packet over the backplane includes the step of transmitting the packet over the multicast fabric.

Claim 5 (Original): The method of claim 4 further comprising the step of transmitting, after the source address has been associated with the first switching module, other packets having the same source address over the unicast fabric if their respective destination addresses are found in the memory.

Claim 6 (Original): The method of claim 1 wherein the step of associating the source address with the first switching module includes the step of adding the source address to the memory associated with the first switching module.

Claim 7 (Original): The method of claim 6 wherein the step of associating the source address with the first switching module further includes the step of adding the source address to a memory associated with at least one of other switching modules.

Claim 8 (Original): The method of claim 6 wherein the memory associated with the first switching module includes a content addressable memory (CAM) included in the first switching module.

Claim 9 (Previously Presented): A method of source learning in a data switch having a plurality of switching modules interconnected over a backplane, where the backplane includes a unicast fabric and a multicast fabric, the method comprising the steps of:
receiving a packet having a source address on a first switching module;
looking up the source address in a CAM associated with the first switching module to determine if the source address is found in the CAM;

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providing a source learning indication for the packet if the source address is not found in the CAM associated with the first switching module;
determining a VLAN ID from a source CAM index (SCI) of the source address if the source address has been found;
determining the VLAN ID from a source virtual port number (SVPN) if the source address has not been found;
transmitting the packet over the backplane; and
associating the source address with the first switching module;
wherein the step of associating the source address with the first switching module includes the step of adding the source address to the memory associated with the first switching module.

Claim 10 (Cancelled)

Claim 11 (cancelled)

Claim 12 (cancelled)

Claim 13 (currently amended): A multi-path data switch comprising:
a backplane including a unicast fabric and multicast fabric,
a plurality of switching modules coupled to the backplane, at least one switching module including an associated memory; and
a management interface module coupled to the multicast fabric of the backplane,
wherein the unicast fabric couples at least one pair of switching modules on a unicast path, the multicast fabric couples the switching modules and the management interface module on a multicast path, and the management interface module receives a packet having a source address from a particular switching module over the multicast path and associates the source address with the particular switching module, and further

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wherein all other switching modules are disabled from transmitting other packets having the source address as a destination address over the backplane while the source address is being associated with the particular switching module.

Claim 14 (Original): The multi-path data switch of claim 13 wherein the management interface module associates the source address with the particular switching module by instructing the particular switching module to store the source address in its associated memory.

Claim 15 (Original): The multi-path data switch of claim 14 wherein the management interface module associates the source address with the particular switching module by instructing all other switching modules to store the source address in their respective associated memories.

Claim 16 (Original): The multi-path data switch of claim 13 wherein the management interface module associates the source address with the particular switching module if a source learning indicator of the packet has been set.

Claim 17 (Original): The multi-path data switch of claim 16 wherein the packet is converted into cells prior to transmission over the multicast path, and the management interface module associates the source address with the particular switching module if the source learning indicator of the cells has been set.

Claim 18 (Original): The multi-path data switch of claim 16 wherein the source learning indicator is set if the source address of the packet is unknown.

Claim 19 (Previously Presented): The multi-path data switch of claim 13 wherein the particular switching module is disabled, for a predetermined period of time, from transmitting other packets having the same source address as the packet over the backplane.

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Claim 20 (Original): The multi-path data switch of claim 13 wherein the particular switching module is disabled from transmitting other packets having the same source address as the packet over the backplane while the source address is being associated with the particular switching module.

Claim 21 (cancelled)

Claim 22 (Original): The multi-path data switch of claim 13 wherein, after the source address has been associated with the particular switching module, the particular switching module transmits all other packets having the same source address over the unicast fabric if their respective destination addresses are found in the memory associated with the particular switching module.

Claim 23 (currently amended): An apparatus for packet forwarding in a multi-path data switch having a plurality of switching modules, the apparatus comprising:

means for checking for at least one inbound packet whether the packet has a known destination address;

means for checking for at least one inbound packet whether the packet has a known source address;

means for forwarding at least one packet having a known destination address over a switch backplane on a unicast path, unless the packet has an unknown source address;

means for source learning, wherein an unknown source address of a packet is associated with a particular switching module that receives the packet from a network;
and

means for forwarding at least one packet having a known destination address and an unknown source address over the switching backplane on a multicast path;

wherein the means for source learning includes means for disabling other

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switching modules from transmitting packets having the source address as a destination address over the backplane while the source address is being associated with the particular switching module.

Claim 24 (cancelled)

Claim 25 (currently amended): The apparatus of claim 23 24 wherein the means for source learning further comprises means for storing the source address, and the means for storing the source address stores the source address in a memory of the particular switching module.

Claim 26 (Original): The apparatus of claim 25 wherein the means for storing the source address stores the source address in respective memories of all other switching modules.

Claim 27 (currently amended): The apparatus of claim 23 24 wherein the means for source learning includes means for temporarily disabling the particular switching module for a predetermined amount of time from transmitting other packets having the same source address as the packet over the backplane.

Claim 28 (currently amended): The apparatus of claim 23 24 wherein the means for source learning includes means for disabling the particular switching module from transmitting other packets having the same source address as the packet over the backplane while the source address is being associated with the particular switching module.

Claim 29 (currently amended): The apparatus of claim 23 24 wherein the means for source learning includes means for temporarily disabling other switching modules for a predetermined amount of time from transmitting packets having the source address as a destination address over the backplane.

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Claim 30-32 (cancelled)

Claim 33 (Previously Presented): The method of claim 1 wherein other switching modules are disabled, for a determined period of time, from transmitting other packets having the source address of the packet as a destination address over the backplane.

Claim 34 (Previously Presented): The method of claim 1 wherein other switching modules are disabled, for a period of time, from transmitting other packets having the source address of the packet as a destination address over the backplane.